Operational Firepower
the Broader Stroke

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Your first act against the enemy shouldn't be a nibble! It should demonstrate determination and have traumatic impact!

—Sir John Woodward[1]

Maneuver and firepower should not be considered separate operations against a common foe but complementary. Firepower resources establish a mobility advantage over the enemy and ease operational maneuver. Generally this refers to several tasks: attacking deep force concentrations, blinding sensors, disrupting mobility and preparing the enemy for decisive closure.

JOINT FIREPOWER synchronized with operational-level maneuver bites with formidable force and terrorizes the enemy. Precise, brisk, devastating operational firepower has been around only since World War II, and its place in major operations and campaigns is no less important today than at Normandy. Firepower is a fundamental tool of the operational artist, and every campaign planner needs a sense of how such devastating power can be most effective.

Following the smoothbore age, military operations changed course, and open warfare resolved into close encounters around fixed points. While maneuver was prominent during three of the four years of the American Civil War, the fourth was largely spent in siege operations. The Franco-Prussian War began with six weeks of maneuver, followed by a five-month siege on Paris. The Russo-Turkish War of 1877 was basically a single-siege operation, and the Russo-Japanese War of 1904-05 closed with 600,000 men consumed in trench warfare.

Because of this attrition form of warfare, military leaders concluded that heavier firepower was needed. In 1916 during the battle of Verdun, the Germans heaped two million rounds on French positions at the rate of 100,000 rounds an hour. While these are impressive figures and the magnitude of the barrages must have been awe-inspiring, firepower alone did not achieve an operational decision in the precursor events to World War I, nor did it during the devastating years of the war itself.[2]

Actions during World War I repeatedly demonstrated that a single battle was no longer sufficient to achieve victory—or—perhaps any of the strategic aims of the conflict and that firepower alone could not be decisive without a more integrated and compelling link to the entire campaign design. Overwhelming firepower may influence success in engagements and battles, but to achieve national security objectives, overall campaigns must be successful.[3]

The lack of integrated firepower and maneuver at the operational level during World War I compels us to look to World War II for examples of such integration. First the Germans, then the Allies, learned to integrate firepower with operational maneuver to execute broad-scope, decisive campaigns across Africa, Europe and Russia. They quickly found that operational art is more than planning and executing tactics on a grand scale. It is designing and controlling sequential, simultaneous operations across a theater that gives direction and meaning to the tactical level. In this context operational firepower also becomes more than just fire support. It is not driven by targeting at the lowest tactical levels and compiled into target sets to support coming engagements. Operational firepower is compelled by the overall campaign design and thus the operational-level tasks and priorities that must be accomplished within each phase of the campaign.[4]

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Firepower

The term "operational firepower" refers to a commander in chief's (CINC's) application of fires to achieve a decisive impact on the conduct of a campaign or major operation. Operational firepower, while a separate element of the concept of operations, must closely integrate and synchronize with the CINC's concept of maneuver. At the operational level, firepower is defined in terms of what it does rather than what it is. It does not necessarily directly equate to attrition warfare and, of necessity, plays a critical role in maneuver warfare.[5]

Operational maneuver and fires may occur simultaneously within a commander's battle space, at times for different but related objectives, and at other times maneuver and fires must be synchronized. Lethal operational firepower is not simply fire support writ large. It is consciously targeting and attacking targets whose destruction will significantly affect the campaign or major operation. It includes allocating joint and combined air, land, sea and space means. Based on the operational commander's vision of how the campaign will unfold, operational fire objectives are established, and targets are designated and integrated.[6]

Operational firepower performs three general tasks within the campaign:

- Isolates the battlefield by interdiction.
- Destroys critical enemy functions and facilities, eliminating or substantially degrading enemy operational-level capabilities.
- Facilitates operational maneuver by suppressing enemy fires, disrupting maneuver and creating gaps in defenses.

Operational fires help achieve operational and perhaps strategic objectives while holding enemy critical functions at risk throughout the depth of the battle space. They are more than deep fires because they extend the battlefield in space and time. Existing capabilities permit acquisition and attack at increasing ranges and faster response times than ever before. Operational firepower can expose or allow attacks directly on the center of gravity and set conditions for maneuver. Through disruption, delay or by limiting critical functions, firepower can dictate the terms of future battle.[7]

Balancing competing "close" and "deep" demands is a critical aspect of operational command. Modern operational-level warfare involves meeting the enemy along the front while destroying forces well into enemy rear areas.[8] Since World War I, lethal firepower has been a primary option in meeting warfare's many demands. Attrition has often been a priority requirement, but it should not dominate the design of a well-orchestrated campaign.

Firepower is often associated with attrition, which depends on industrial strength, cumulative effects and destroying target arrays. Overusing this method leads to routine target acquisition and repetitive repertoires to support a preponderance of firepower. While firepower is an effective means of war, it is neither self-sufficient nor a swift instrument of victory. The Vietnam experience affirms this truth: as firepower and attrition dominate operational design, maneuver seems less important; yet, without it, a decision is improbable.[9]

Operational Maneuver

Decisively defeating an enemy force requires dominant maneuver throughout the depth of the battle space. Dominance requires seeing activity in the battle space, moving rapidly through its depth and directing firepower to dominate the maneuver relationship. Final dominance comes through simultaneously applying firepower and controlling terrain.[10]

Relational maneuver creates a decisive impact on a campaign by securing operational advantages before battle or exploiting tactical success. By avoiding enemy strengths, relational maneuver attempts to incapacitate through systematic disruption rather than physical destruction. The potential advantages are disproportionate to the effort and resources involved. Facilitating maneuver with firepower can yield astounding results such as Operation *Neptune* to establish the Normandy lodgment or Operation *Cobra* to break out of the lodgment.[11]

How does a planner design a campaign to facilitate maneuver? Many operational-level planners are perplexed by this notion and often rely on their more familiar experiences with fire support. To better understand the maneuver-firepower connection requires a fundamental grasp of maneuver forms and historical uses of firepower.

At the operational level there are two basic forms of maneuver that support sustained land action: cen-

US Army

Alert GIs of an M-51 quad-.50 caliber battery watch as US and German planes dogfight above them.

Because envelopments and turns are similar, the general character of operational firepower that facilitates such maneuvers would take on similar patterns. In fact, many patterns are similar to those required in central maneuvers with one notable exception—protecting a flank. The US XIX TAC supporting General George S. Patton's Third Army during mid-August 1944 demonstrated how to protect an operational flank using firepower.

tral maneuver using penetration, frontal attack and infiltration; and flanking maneuver using envelopment or turning movement. World War II illustrates how each form has been applied and how firepower facilitated success. For example, Operation *Neptune* demonstrated a frontal attack, Operation *Cobra* a penetration and Operation *Bluecoat* an envelopment.[12] The more clearly defined use of a turning movement might be demonstrated by General Douglas MacArthur's avoidance of Rabaul. Finally, British Field Marshal William Slim's use of the Chindits in Burma illustrates an operational-level infiltration.[13]

Central maneuvers are designed to rupture enemy defenses, create assailable flanks and access rear areas. Infiltrations covertly move forces through enemy lines to reconcentrate in rear areas, whereas penetrations on a narrow front or frontal attacks on a broad front seek to overwhelm the enemy directly through the mass of combat power.[14]

Flanking maneuvers are designed to fall on an assailable flank, creating the conditions for encirclement or pursuit and forcing the enemy to abandon prepared defenses or fight in a direction and on terrain we choose. Preferably, such maneuvers would come from an unexpected direction, and while envelopments seek to fix enemy frontal defenses, a turn avoids these altogether.[15]

Maneuver and firepower should not be considered separate operations against a common foe but complementary. Firepower resources establish a mobility advantage over the enemy and ease operational maneuver. Generally this refers to several tasks: attacking deep force concentrations, blinding sensors, disrupting mobility and preparing the enemy for decisive closure. But, as in synchronizing any operational functions, there is more to consider than this simple list implies, and each form of

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maneuver requires its own set of considerations. Past illustrations will help, but they reflect the enemy, terrain and available resources.

Central Maneuver

Frontal assaults and penetrations require facilitating similar methods. The official US Army history of the cross-channel attack records that the "task of smashing through enemy beach defenses was to be facilitated as far as possible by naval fire and air bombardment." The Atlantic wall was expected to contain 15,000 concrete strong points, 15 coastal batteries and 300,000 defenders. A frontal assault against such defenses required heavily suppressing enemy fire, tearing gaps in the imposing defenses, isolating enemy reserves from the lodgment area, destroying German mobility and supporting the deception (Operation *Fortitude*).[16]

For three months lines of communication (LOC) in northern France were interdicted to sever transportation links to Normandy. Between 1 March and 6 June 1944 air forces cut rail traffic by 60 percent, destroying 900 locomotives, 16,000 freight cars and shooting down 1,000 *Luftwaffe* aircraft in May alone. All Seine River bridges from Rouen to Mantes-Gassicourt were rendered impassable. An area the size of Indiana was isolated in the northwest corner of France. German reserves were so successfully isolated that they had to walk the last 100 miles into combat. German reserves were isolated from the lodgment area, the supporting mobility network was neutralized, and the *Luftwaffe* had only 400 first-line aircraft operational. The stage had been masterfully set for the invasion along the Normandy coastline.[17]

As Operation *Neptune* began, the tasks of suppressing defenses and tearing selected gaps became primary concerns. The combined naval forces dedicated scores of ships to this effort. Fifty-two battleships, cruisers, destroyers and other ships supported the First US Army in the US sector. On 6 June Omaha and Utah Beaches were bombarded with naval gunfire, including 13,000 rockets, and a supporting bomber attack dropping 800 explosive tons. In the British sector, from 0300 to 0500 hours, more than 1,000 aircraft concentrated 5,000 tons of bombs on German defenses.[18]

During all of this there was a major effort to support deception as part of Operation *Fortitude*. In preliminary action to isolate reserves and debilitate German mobility, 10 percent of the bomb tonnage dropped from mid-April until D-day was directed against coastal batteries, but only one-third of that tonnage was dropped in the invasion area.[19]

Almost two months later Operation *Cobra*, designed to break out of the lodgment area, illustrated the meaning of tearing gaps in enemy defenses. The First US Army was poised to break out of the lodgment with 15 divisions in four corps. Behind it were 12 fighter-bomber groups based on the continent to support its effort. During his planning phase, General Omar Bradley said he wanted to "obliterate the German defenses along the Périers Saint-Lo highway" and use an "air attack concentrated in mass" into the open terrain beyond Saint-Lo highway.[20]

All Eighth US Air Force heavy bombers and fighters, Ninth US Air Force medium bombers and fighter-bombers, and the Royal Air Force 2d Tactical Air Force concentrated against a rectangular target south of the Périers-Saint-Lo highway. The target was 7,000 yards wide and 2,500 yards deep. For two hours and 25 minutes, 2,500 planes swarmed over the target, dropping 5,000 tons of explosives, napalm and white phosphorous. From 25 to 28 July, 2,926 aircraft flew almost 10,000 sorties supporting the First US Army operational objective. Lieutenant General Fritz Bayerlein, commander of *Panzer Lehr* division, was astonished by the destruction and characterized the onslaught as "Hell. . . . The planes kept coming . . . my front lines looked like a landscape on the moon, and at least 70 percent of my personnel were knocked out of action. . . . All my front-line tanks were knocked out. . . . We could do nothing but retreat. A new SS tank battalion was coming in with 60 tanks . . . [it] arrived [with] five." The destruction was so complete in the target area that it prompted discouraged Field Marshal Hans Guenther von Kluge to report, "As of this moment, the front has burst." Operational firepower facilitated First US Army's penetration three miles wide and one to three miles deep and precipitated the defeat of the German 7th Army.[21]

Operational-level infiltrations are somewhat unique in history; however, operations in Burma by Brigadier Orde Wingate's special force of Chindits

Bombs from Fifth Air Force B-25s straddle a Japanese patrol boat from a convoy headed for Rabaul, 16 February 1944. In the background (*see inset*) a cargo vessel receives a fatal hit while only the bow remains visible of another ship heading for the bottom. The convoy was caught off Kavieng, New Ireland.

US Air Force

On 12 October 1943, 350 aircraft from the US Fifth Air Force and the Royal Australian Air Force began concentrating operational-level fires against [the 100,000-man garrison at] Rabaul. . . . The attempt to isolate Rabaul was continuous, and by February 1944 no Japanese warships remained at Rabaul, and no fighters opposed Allied air efforts within hundreds of miles.

exemplify how firepower might support such an effort. Slim, having retreated from Burma during 1941, found himself in an economy-of-force theater throughout World War II. As he began to transition to a theater offensive against Japan's 15th Imperial Army in 1944, the security of his northern flank became a major concern. Slim's objective was to secure his northern flank and prevent Japan from reinforcing its 15th Imperial Army. He used the Chindits to cut the LOC of enemy forces facing US General Joseph Stilwell on the northern front.[22]

Operation *Thursday* began on 5 March 1944. Wingate's force was to cut the Japanese LOC, prevent reinforcement of the northern front, deny Japanese use of the main rivers and cause the greatest possible confusion and damage. During March, 9,000 men and 1,350 pack mules and cattle of the British 77th and 111th Brigades were airlanded 200 miles within Japanese-held territory. Another 3,000 16th Brigade troops marched 450 miles across Burma's Naga Hills in six weeks to join the initial infiltration into an operational area formed by the Mogaung-Indaw-Bhamo triangle. A determined Wingate had achieved one of the greatest infiltrations in history "to insert himself in the guts of the enemy."[23]

For months the Chindits, dispersing and reconcentrating behind enemy lines in classic infiltration style, accomplished their objectives and prevented Japanese use of interior lines against Slim's main offensive effort. Operation *Thursday* and follow-on operations were among the largest and most successful infiltrations in history. Firepower facilitated this maneuver by isolating the operational area, suppressing Japanese firepower, supporting deception to cover the infiltration and destroying Japanese command and control capabilities.

Britain's Number 1 Air Commando and 3d Tactical Air Force received the first priority of establishing and maintaining local air superiority over the operational area. This force destroyed all Japanese air forces that could influence Chindit operations.

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US Strategic Air Force strikes along the Southern Front caused the Japanese to believe Lower Burma was about to be invaded from India. Consequently, Japanese reserves were not free to oppose Chindits on the Northern Front. Approximately 750 tons of munitions were delivered to facilitate infiltration of the Japanese 15th Army. Antiaircraft firetraps were also used against Japanese air forces. Allied air forces would lure the Japanese into these networks to increase attrition and prevent interference with the infiltration operations.[24]

Flanking Maneuver

Because envelopments and turns are similar, the general character of operational firepower that facilitates such maneuvers would take on similar patterns. In fact, many patterns are similar to those required in central maneuvers with one notable exception—protecting a flank. The US XIX Tactical Air Command (TAC) supporting General George S. Patton's Third Army during mid-August 1944 demonstrated how to protect an operational flank using firepower. According to planners, "Never in military history had a ground commander entrusted the defense of a flank to tactical aircraft." The rapid maneuver during Patton's exploitation toward the Seine River line and Paris called for special emphasis ahead of the advance and especially along the vulnerable Loire valley flank.[25]

When the original envelopment to close the Argentan pocket was not successful, Bradley authorized execution of Operation *Lucky Strike*'s plan B, a wider envelopment to encircle German forces south of the Seine River. Patton's Third Army advanced to the Seine along three avenues, which took three corps to the Dreux-Chartres-Orleans line by 18 August. The Seine River line was forced 35 miles south of Paris within a week. Third Army made rapid progress in this effort while protecting 12th Army Group's flank along the Loire River. Beyond this protection was the XIX TAC, whose mission was to protect Third Army and thereby the entire southern wing of the invasion force.[26]

Brigadier General O.P. Weyland's XIX TAC had full responsibility for protecting the extensive and vulnerable southern flank along the Loire valley "to keep the Germans . . . immobile and off balance, and prevent any massing of enemy strength to oppose the Third Army."[27] XIX TAC constantly patrolled the Loire valley, attacking every target related to protecting the southern wing. On 8 September the German commander of Biarritz, Brigadier General Botho Elster, agreed to surrender 20,000 troops at the Beaugencys bridge in Orleans under one condition: "Keep the 'Jabo' [fighter-bombers] off my men." During this period large numbers of enemy troops attempted to surrender to low-flying aircraft for the first time in history. Patton, in his direct style, wrote a compliment to General Henry (Hap) Arnold, dated 17 August, which read, "For 250 miles I have seen the calling cards of [XIX TAC] fighter-bombers, which are bullet marks in the pavement and burned tanks and trucks in the ditches."[28]

Protection of the operational area's right wing and Patton's Third Army illustrates the synergistic effects of orchestrated maneuver and firepower—and the dilemma facing any foe under such circumstances. Firepower afforded protection to Third Army's flanking maneuver, which catalyzed German countermoves into positions where lethal firepower could concentrate against them.

MacArthur's turn of Rabaul illustrates equally well operational fires protecting one's flank. After the Battle of Coral Sea in May 1942, Japanese penetration toward Australia and LOC into the Southwest Pacific region was disrupted, but Rabaul still dominated the region. From this major naval and air base, the Japanese could continue to threaten the LOC to Australia and New Zealand and dominate the right flank of any regional operations. Allied forces were held to the Bismarck barrier, where the Japanese effectively waged attrition warfare to dominate the approaches to Rabaul and contain Allied forces.

After one year of campaigning, Allied forces had advanced less than 200 miles in the Southwest Pacific. At that rate it would have taken 15 years to reach Japan. An approach through the Central Pacific looked more inviting as the Japanese began reinforcing Rabaul, eventually assembling 100,000 well-armed men.[29]

Allied gains in the Bougainville area during October and November 1943 caused the Japanese to further concentrate naval and air forces at Rabaul.

Although Rabaul had been a main objective during the early stages of the Southwest Pacific campaign, it was quickly building beyond Allied capabilities to attack and capture it. Yet, the Allies had to contain forces based there. MacArthur decided to isolate and bypass Rabaul and the Japanese Seventeenth Army in the Solomons. A new plan emerged, which called for Allied forces to advance along the New Guinea coast to the Vogelkop Peninsula in 1944 with Mindanao as the subsequent objective.[30]

On 12 October 1943, 350 aircraft from the US Fifth Air Force and the Royal Australian Air Force began concentrating operational-level fires against Rabaul. From October through December 1943 air and naval forces pummeled Rabaul. The attempt to isolate Rabaul was continuous, and by February 1944 no Japanese warships remained at Rabaul, and no fighters opposed Allied air efforts within hundreds of miles. By the end of 1943 the Japanese had lost 3,000 aircraft in the struggle for the Solomons, one of which carried Admiral Isoroku Yamamoto, the regional commander and one of the original architects of Japanese naval power and the Pearl Harbor attack. His death alone was a serious loss to the Japanese. In their attempt to reinforce Rabaul, the Japanese had fallen prey to devastating firepower. A well-trained and well-equipped army was left isolated, bypassed and contained by Australian forces in an economy-of-force effort as Allied forces went westward to Wewak and ultimately the Philippines. Their right flank had been secured by prudently using operational fires to facilitate the turning movement that avoided Rabaul's imposing defenses.[31]

Interdicting rear and deep areas of the battle space is nothing new. It is not warfare's medium (air, sea or land) that makes the difference but the opposing forces' relative mobility and the operational tempo. The greater the mobility, the less consequential the locations of the opposing forces. Facilitating maneuver's mobility and tempo using firepower takes on meaning well beyond attrition alone.

Maneuver and firepower have rarely stood alone as decisive in and of themselves; they are inseparable and complementary. While one might dominate a particular phase of a campaign, the most beneficial effects derive from integrating operational-level maneuver and firepower relative to the enemy center of gravity. When maneuver and firepower are synergistically orchestrated to disrupt the supporting structure, unbalance command decisions and impose chaotic disorganization, disproportionate success is possible. Focusing on maneuver or firepower without the other misses the point altogether.[32]

NOTES

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10. Secretary of the Army Togo D. West Jr. and Chief of Staff, US Army, General Gordon R. Sullivan, *Decisive Victory–America's Power Projection Army*, A White Paper, Headquarters, Department of the Army, Washington DC, October 1994, 18.
11. Ibid., 93-108.
12. Operation *Bluecoat* was a British operation from Caumont, France, to get behind German forces trying to swing west to face the Americans. Martin Blumenson, *Breakout and Pursuit* (Washington, DC: Office of the Chief, Center of Military History [CMH], 1961), 289.
13. FM 100-5, *Operations* (Washington, DC: GPO, June 1993), 7-11 and 7-12.
14. Ibid.
15. Ibid.
16. Gordon A. Harrison, *US Army in World War II: European Theater of Operations: Cross-Channel Attack* (Washington, DC: Office of the CMH, 1951), 137 and 193.
17. Omar N. Bradley, *A Soldier's Story* (Chicago, IL: Rand McNally, 1951), 245 and 279; Harrison, 228-30.
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21. Ibid., 221-40 and 333; D'Este, 402.
22. Viscount Slim, *Defeat into Victory* (London: Papermac, Macmillan Publishers Limited, 1986), 251-59; Micheal Calvert, *Chindits—Long Range Penetration* (New York: Ballantine Books Inc., 1973), 21.
23. Slim, 66-67 and 77; Calvert, 63; Frank Owen, *Central Office of Information, The Campaign in Burma* (London: His Majesty's Stationary Office, 1946), 66-7.
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25. O.P. Weyland, "Tactical Air Operations in Europe," Headquarters (Advanced) XIX Tactical Air Command, 19 May 1945, 14 and 48.
26. Bradley, 379; Blumenson, 567; D'Este, 412-13.
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28. Ibid.; Martin Blumenson, *The Patton Papers, 1940-1945* (Boston, MA: Houghton Mifflin Co., 1974), 516; Army Air Force, *Wings at War*, No. 5, Air-Ground Teamwork on the Western Front (Washington, DC: Headquarters, Army Air Forces, 1945), 2.
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